

# Autoantibodies in the nervous system

Citation for published version (APA):

Mané Damas, M. (2020). *Autoantibodies in the nervous system: pathophysiology and new therapeutic strategies*. [Doctoral Thesis, Maastricht University]. Ipskamp Printing BV.  
<https://doi.org/10.26481/dis.20201216md>

**Document status and date:**

Published: 01/01/2020

**DOI:**

[10.26481/dis.20201216md](https://doi.org/10.26481/dis.20201216md)

**Document Version:**

Publisher's PDF, also known as Version of record

**Please check the document version of this publication:**

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

[www.umlib.nl/taverne-license](http://www.umlib.nl/taverne-license)

**Take down policy**

If you believe that this document breaches copyright please contact us at:

[repository@maastrichtuniversity.nl](mailto:repository@maastrichtuniversity.nl)

providing details and we will investigate your claim.

## **Autoantibodies in the nervous system: pathophysiology and new therapeutic strategies**

### **Summary**

Antibodies are able to target and eliminate foreign pathogens such as viruses and bacteria. However, when the tolerance fails, antibodies can mistakenly target and damage tissues and organs from our own body, resulting in antibody-mediated autoimmune disorders.

Autoimmune encephalitis is a neurological disorder with prominent psychotic symptoms, caused by the presence of antibodies against neuronal surface receptors. The presence of these autoantibodies in purely psychotic disorders, even though rare, seems to be associated with a strong disease phenotype. The identification and characterization of known and novel neuronal autoantibodies will help to comprehend the disease mechanisms and guarantee an accurate diagnosis and treatment.

Myasthenia gravis is characterized by muscle weakness and fatigue and in most of the cases, antibodies against the acetylcholine receptor. The identification of susceptibility factors like Dok7 help to understand differences between patients and to design novel treatments. Additionally, the depletion of plasma cell with the novel proteasome inhibitor, ixazomib, has shown a strong treatment efficacy in myasthenia gravis. Knowledge will smooth the path towards more specific therapies, circumventing the effects of systemic immune suppression and increasing tolerability.